

BOSTON
REDEVELOPMENT
AUTHORITY

Raymond L. Flynn
Mayor

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Boston, MA 02201
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gm. 19-653

BRA
2814

January 18, 1991

Mr. Anthony Pangaro
General Partner
Macomber Development Associates
One Main Street
Cambridge, MA 02142

Dear Mr. Pangaro:

Re: 10 St. James Avenue Development

Enclosed is the Scoping Determination for the 10 St. James Avenue Development (the "Proposed Project"), for which you recently submitted a Project Notification Form ("PNF") pursuant to Article 31 of the Boston Zoning Code ("the Code"). This Scoping Determination requests information that the Boston Redevelopment Authority ("BRA") requires in response to the PNF which you submitted November 9, 1990.

The BRA may require additional information during the course of our review of the Proposed Project. If you have any questions concerning the Scoping Determination or otherwise in connection with review of the Proposed Project, please contact Tom Maistros at 722-4300.

Sincerely,



Homer Russell
Assistant Director for
Urban Design and Development

Enclosure



BOSTON REDEVELOPMENT AUTHORITY

SCOPING DETERMINATION
10 ST. JAMES AVENUE

PROJECT DESCRIPTION

PROJECT NAME: 10 St. James Avenue

PROJECT LOCATION: 2-10 St. James Avenue
75-81 Arlington Street
301-317 Stuart Street

PROPONENT: RDC-10 St. James Avenue Realty Trust

PROJECT NOTIFICATION: November 9, 1990

The Boston Redevelopment Authority ("BRA") is issuing this Scoping Determination pursuant to Section 31-5 of the Boston Zoning Code (the "Code"), in response to a Project Notification Form ("PNF") which the Proponent filed November 9, 1990. The Scoping Determination requests information that the BRA requires for its review of the Proposed Project in connection with the following:

- (a) Development Review pursuant to Article 31 of the Code;
- (b) Approval of a Development Impact Project Plan, pursuant to Article 26A of the Code, and the entering of agreements for the Development Impact Project Contribution and Jobs Contribution Grant, pursuant to Articles 26A and 26B of the Code; and
- (c) Decisions or recommendations with respect to zoning relief required for the Proposed Project.

PREAMBLE

The BRA is reviewing the Proposed Project pursuant to multiple sections of the Code. The Proposed Project, as described below, is being reviewed pursuant to Article 31 of the Code, Development Review Requirements, which sets out a comprehensive procedure for project review and requires the BRA to review the project's impacts in the following areas: transportation, environmental protection, urban design, historic resources, and infrastructure systems. Article 31 requires the submission of a satisfactory Final Project Impact Report prior to the issuance of a building permit.

The Proposed Project is located in Subdistrict K, a Medium Growth



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Subdistrict as stipulated under Article 27D of the Boston Zoning Code, the Downtown Interim Planning Overlay District.

The permanent zoning for this area referred to as the Commercial Back Bay District is currently being drafted by BRA staff and is located adjacent to the Boylston Street Zoning District, the Huntington Avenue/Prudential Center District and the Midtown Cultural District, and will be influenced by these recently adopted zoning amendments. Currently, the Commercial Back Bay Proposed Zoning is undergoing a community-based planning process and will be heard at public hearings this winter.

10 ST. JAMES AVENUE PROPOSED PROJECT DESCRIPTION

According to the PNF filed on November 9, 1990, the Proposed Project, located on a 1.72 acre site, is generally bounded by St. James Avenue, Arlington Street, Stuart Street, and the Liberty Mutual Insurance Building. The Proposed Project includes the renovation of the 75 Arlington Street building, formerly known as the Paine Furniture Building, and the demolition of the deteriorated Greyhound Bus Terminal for construction of a new office and retail structure joined to 75 Arlington Street by a pedestrian galleria. The PNF sets forth the proposed development program as follows:

<u>Component</u>	<u>Office/ Retail Use</u>	<u>Cultural/ Daycare Galleria</u>	<u>Height*</u>	<u>Size</u>
10 St. James Ave. (New Building)	513,500	14,000	265 Feet	527,500
75 Arlington St. (Paine Building)	236,500	7,500	130 Feet	294,000

*Zoning Definition: to top of last habitable floor

Parking

The Proposed Project would consolidate parking on-site in a 500 space underground facility. This will help to lessen the considerable double parking and illegal on-street parking which contributes to the traffic congestion on Stuart Street and St. James Avenue, especially during the afternoon peak period.

DEVELOPMENT REVIEW REQUIREMENTS - ARTICLE 31

Article 31 of the Code provides a process by which the BRA reviews large scale development projects. As previously stated, the BRA is issuing this Scoping Determination pursuant to Section 31-5. The DPIR must include an analysis of the Proposed Project

as described in the PNF.

An alternative Option B and analysis should be conducted to determine whether a project that complies with the height and massing limits set by the existing zoning would result in any significant impacts or benefits, as compared with the project as proposed in Option A.

Studies should be comprised of urban design and environmental analyses as well as sensitivity analyses, which qualitatively address all DPIR environmental, urban design and infrastructure topics as stipulated in Article 31-5 of the Boston Zoning Code. However, the analysis for Option B may be limited to dealing with impacts that would be altered as a result of the height reductions, i.e., shadow, daylight and wind. Sensitivity analyses should indicate whether any specific massing configurations warrant detailed quantitative analysis in the Final Project Impact Report ("FPIR"). Within each alternative, the studies might also reveal that square footage adjustments among different uses might be desirable.

The options are as follows:

	<u>Option A (PNF)</u>	<u>Option B</u>
Office	713,000 SF	691,630 SF
Retail	37,000 SF	37,000 SF
Cultural	<u>21,500 SF</u>	<u>21,500 SF</u>
Total GSF	771,500 GSF	750,130 GSF
FAR	10.28	10
Height	265 FT	155 FT

A. GENERAL INFORMATION

1. Applicant Information

a. Development Team

(1) Names

(a) Proponent (including description of development entity)

(b) Attorney

(c) Project Consultants

(d) Architect

(2) Business Address and telephone number for each of the above

(3) Designated contact for each

(4) Description of all current or formerly-owned developments in Boston

b. Legal Information

(1) Legal judgments or actions pending concerning the Proposed Project

(2) History of tax arrears on property owned in Boston by the Proponent

(3) Legal description of the parcel to be developed and evidence of a process by which the Proponent will gain site control over the necessary project area prior to construction. The document must include current ownership and purchase options of all parcels in the proposed project, all restrictive covenants and contractual restrictions affecting the proponent's right of ability to accomplish the Proposed Project, including any third party agreements.

2. Financial Information

(See Appendix 1 for required financial information which may be submitted to the BRA under separate cover).

Development and Operating Pro Formas for all components of the Project (office, retail, cultural and parking) shall be provided. A sensitivity analysis revealing the

financial performance of Option B relative to Option A is also required in the DPIR.

- a. Full disclosure of names and addresses of all financially involved participants and bank references pursuant to Article 31A
- b. Development Pro Forma for all components of the Project
- c. Ten Year Operating Pro Forma for all components of the Project

3. Project Area

- a. Description of metes and bounds of project area including all land or easements owned or required for completion of said Project

4. Public Benefits

- a. Development Impact Project Contribution and Jobs Contribution Grant specifying amount of housing linkage and jobs linkage contributions and method of housing linkage contribution (housing payment or housing creation)
- b. Increase in tax revenues, specifying existing and estimated future annual property taxes
- c. Anticipated employment levels including the following:
 - (1) Estimated number of construction jobs
 - (2) Estimated number of permanent jobs
- d. Submission of Boston Residents Construction Plan in accordance with the Boston Jobs Policy requiring that 50, 25, and 10 percent of person-hours in construction jobs on publicly-assisted or large-scale private commercial projects be worked by Boston residents, minorities and women
- e. Submission of voluntary Employment Opportunity Plan presenting good-faith efforts to achieve the goal that the profile of permanent employees in the building be 50 percent Boston residents
- f. Description and location of day care facilities. An amount equal to at least 8,000 square feet must be provided either on-site or within close proximity to the Project.

5. Regulatory Controls and Permits

- a. Existing zoning requirements, zoning computation forms, and any anticipated requests for zoning relief, and and special provisions which govern the site
- b. Anticipated permits required from other local, state, and federal entities with a proposed application schedule
- c. The Proposed Project is subject to the Massachusetts Environmental Policy Act (MEPA), submission of required documentation including copies of the Environmental Notification Form and a statement as to whether the applicant will coordinate the submission of materials required by MEPA with the submission of materials required by this scope

6. Community Groups

- a. Names and addresses of Project area owners, displacees, abutters, and also any community groups which, in the opinion of the applicant, may be substantially interested in or affected by the Proposed Project
- b. A list of meetings proposed and held with interested parties as well as the commitment to a review process and schedule which will engage each of the abutting neighborhoods as requested by the abutters

B. TRANSPORTATION COMPONENT

The following requirements incorporate comments by the Boston Transportation Department ("BTD") regarding transportation issues and objectives for the Proposed 10 St. James Avenue Project. Included as Appendix 2 are BTD's additions to the required analysis within this scope. Further comments of abutters to the project including the Neighborhood Association of the Back Bay, the Back Bay Association, the Bay Village Association, and the Park Plaza Citizens' Advisory Committee have been incorporated into the Scope.

The following must be submitted for Option A:

1. Vehicular Traffic

All information regarding vehicular traffic must be submitted for Option A. In addition, the information presented in this section must be submitted for the following alternatives:

- a. 1990 Existing site condition
 - b. 1995 No-Build of project
 - c. 1995 Full Build of project
- A. Analysis of the existing conditions at the following intersections:
- o Arlington Street/Stuart Street/Columbus Avenue
 - o Arlington Street/St. James Avenue/Providence Street
 - o Stuart Street/Berkeley Street
 - o St. James Avenue/Berkeley Street
 - o Boylston Street/Berkeley Street
 - o Arlington Street/Boylston Street
 - o Stuart Street/Charles Street

Intersection analysis in the future condition must reflect any changes in roadway alignment and configuration. Also, the 1995 Full Build alternative should analyze conditions assuming both the existing and proposed Massachusetts Turnpike ramp changes, i.e. the Berkeley Street off-ramp to replace the Arlington Street on-ramp.

- B. Background development assumptions should include any previously approved building construction projects to be included in the No-Build evaluation, including but not limited to the Prudential Center Redevelopment Project as well as the Prudential Center transportation mitigation measures.
- C. An analysis of the impact of the Proposed Project as follows:
- (1) Projection of vehicular trip generation (including automobiles, taxis, trucks, service vehicles and buses) for daily a.m and p.m. peak hours. Available traffic volume counts must be supplemented with new counts, as necessary. Based on data gathered from all sources, a preliminary base traffic volume network will be developed to represent existing morning and evening peak hour conditions. Vehicle trip generation characteristics of the existing 75 Arlington Street building will be determined by survey, and the estimate of future impacts on traffic, parking, and public transportation will be based on net additional development of the site and will distinguish between the impacts associated with current uses on the site.

- (2) Trip distribution
- (3) Modal split and vehicle occupancy analysis differentiating between those for the office facility and those for the cultural facility.
- (4) Site Access (volumes at the Proposed Project's driveways).

2. Parking

- a. Existing parking conditions in the study area
 - (1) Parking characteristics on adjacent streets and blocks proximity to the site
 - (2) The supply of parking, both on and off street. Pricing of off-street parking, particularly for all-day commuter use, will be presented.
- b. Number of spaces proposed, indicating public and private allocation. Availability of public spaces will be determined by reference to published sources such as the BTD's 1987 Downtown Parking Inventory Study, supplemented and updated as necessary with survey data.
- c. The Proposed Project's impact on demand for parking during peak daytime periods as well as the level of utilization of spaces by different user types, and the degree to which joint use of spaces can result in lower parking space demand
- d. A parking plan, including layout, facility design, access and egress characteristics, and size of spaces
- e. Information regarding rate structures and parking operations management

3. Loading

- a. Number of docks
- b. The location and dimension of docks
- c. Estimated size and types of vehicles serving the site, and the ability of the proposed loading docks to accommodate those vehicles. Access and egress for emergency vehicles must also be evaluated
- d. Demand generated by different uses

e. Potential traffic and pedestrian safety impacts

4. Access

- a. Size and maneuvering space for all vehicles on site or in public right-of-way; and the internal maneuvering space for trucks of all sizes, especially with regard to the disruption of on-street traffic flow by trucks backing in or out. Analysis of potential pedestrian-vehicular conflicts must be presented in the DPIR. Information required in this section should be provided at a minimum in plan form showing any and all levels accessible by vehicle.
- b. Access, curb cuts, and/or sidewalk changes required with specific references to vehicular volumes at each driveway accessing the site
- c. Analyses of access to loading docks under various peak and non-peak hours.

5. Public Transportation

- a. Location and availability of existing public transportation facilities. The operating characteristics of the area's private bus carrier services as well as Massachusetts Bay Transit Authority (MBTA) services must be documented.
- b. Usage, capacity, and planned improvements to the existing system
- c. Demand and capacity analysis for peak hours and for periods of peak office and cultural facility trip generation.

6. Pedestrian Circulation

- a. Existing and proposed pedestrian conditions in the study area and on-site for Option A, including identification of pedestrian activity, circulation deficiencies and barriers, and measures to improve such conditions
- b. Pedestrian conditions under full-build scenario. Pedestrian pathways, and volumes using them must be shown, with entry and exit points, waiting areas and points of intersection between pedestrian streams. Methods of separating the cultural facility and office building pedestrian flows must be shown.
- c. Pedestrian volume to capacity analysis and levels of

service on all sidewalks bordering the site, and connections to the Proposed Project across Arlington Street, Stuart Street, and St. James Avenue must be shown.

- d. Flow of pedestrians through the Project site during both peak and non-peak hours.
- e. Connections to public transportation station stops

7. Access Plan

- a. Measures to manage and reduce parking demand and optimize use of available parking spaces, including:
 - o Ride-sharing incentives and information dissemination
 - o Set-asides at reduced rates for high occupancy vehicles (specify number and location)
 - o Parking management to avoid queues and congestion on city streets.
- b. Measures to encourage public transportation use and mitigate project impact on public transit including:
 - o Mass transit information dissemination
 - o MBTA pass sales and subsidies
- c. Measures to reduce peaking, including:
 - o Travel demand modifications
 - o Encouragement of flexible work hours
 - o Restrictions on service and goods deliveries
- d. Measures to mitigate project impacts, including:
 - o Improvements in pedestrian environment
 - o Truck access management plan
- e. Measures to mitigate construction impacts, including:
 - o Time and routes of truck movements and materials deliveries
 - o Worker parking and commuting plan

- o Location of construction staging areas
- o Measures to protect the public safety
- o Measures to ensure access along Arlington and Stuart Streets
- o Storage of materials and equipment
- o The need for full or partial street closures or street occupancy during construction

f. Monitoring Program

A long term program to monitor the travel patterns to and from the Project by tenants and other users of the site and the effectiveness of mitigation measures must be submitted. Information must include travel mode, vehicle occupancy rate, and employee origin/destination surveys.

A Construction Management Plan must be submitted to the Boston Transportation Department.

g. Transportation Management Organization (TMO)

Businesses and institutions in the Back Bay have established a TMO to encourage a cooperative effort at managing parking, and public and private transportation resources to the area. Proposed involvement in this TMO should be included.

Mitigation measures include:

- o Measures to minimize vehicle-trip generation
- o Roadway/traffic operation improvements
- o Transit improvements and measures to preserve commuter bus layover opportunities in the Back Bay
- o Parking management improvements
- o Pedestrian improvements
- o Long-term project impact monitoring

Specific commitments to be made by the developer must be identified. In addition, other public and private sector demand reduction programs that have been programmed for implementation in the study area will be reviewed to identify their effects on this proposed project.

C. ENVIRONMENTAL PROTECTION COMPONENT

Alternatives for analysis are specified under each of the environmental topics which follow.

1. Wind

Wind analyses must be conducted as described below for Alternatives A and B.

A qualitative analysis of the potential pedestrian level wind impacts of the proposed structures is required for the DPIR. This analysis must determine the potential pedestrian level winds adjacent to and in the vicinity of the project site and shall identify any areas where wind velocities are expected to exceed acceptable levels, including the BRA's guideline of an effective gust velocity of 31 mph not to be exceeded more than 1% of the time.

Particular attention must be given to public and other areas of pedestrian use, including, but not limited to, entrances to the Proposed Project and to adjacent buildings, sidewalks on the project site, adjacent to, and opposite the project site, the Public Garden, Park Square, Statler Park, and the outdoor cafes at Heritage-on-the-Garden and the Four Seasons Hotel. Specific locations to be evaluated shall be determined in consultation with and with the approval of the BRA.

Based on the results of the qualitative analyses, a quantitative wind tunnel (hot wire) analysis of pedestrian level wind conditions may be required for the FPIR. The wind tunnel testing shall be conducted in accordance with the guidelines and criteria included in Appendix 3. Specific hot wire locations shall be determined in consultation with the approval of the BRA.

For areas where wind speeds are projected to exceed acceptable levels, measures to reduce wind speeds and to mitigate potential adverse impacts must be identified and tested in the wind tunnel.

2. Shadow

Shadow Analyses must be conducted for Options A and B.

A shadow analysis is required for existing and build conditions for the hours of 9:00 a.m., 12:00 noon, and 3:00 p.m. for the vernal equinox, summer solstice, autumnal equinox, and winter solstice. It should be noted that due to time differences (daylight savings vs.

standard), the autumnal equinox shadows would not be the same as the vernal equinox shadows and therefore separate shadow studies are required for the vernal and autumnal equinoxes.

The shadow impact analysis must include net new shadow as well as existing shadow and must clearly show the incremental impact of the proposed buildings. Shadows of surrounding buildings also shall be included, as appropriate, to indicate clearly the net shadow impact of the Proposed Project.

Particular attention must be given to existing or proposed public open spaces and major pedestrian areas, including, but not limited to, the sidewalks surrounding the project site, the Proposed Project's open spaces and pedestrianways, and other public open spaces including the Public Garden, Statler Park, the fountain minipark and cafe area at the Heritage-on-the-Garden project, and the Bay Village residential area.

The shadow analyses also shall demonstrate compliance with the provisions of Chapter 362 of the Acts of 1990 ("An Act Protecting Certain Public Commons"), which limits the casting of any new shadow on the Boston Common. Design or other mitigation measures to limit or minimize any adverse shadow impact must be identified.

3. Daylight Analysis

Daylight analyses for no-build Options A and B conditions shall be conducted by measuring the percentage of skydome that is obstructed by the proposed project buildings and evaluating the net change in obstruction. The study should treat three elements as controls for data comparisons: existing conditions, the context of the area, and the as-of-right zoning envelope. The areas of interest shall be Arlington Street, Stuart Street, and St. James Avenue. Sample analyses should be taken for each major building element. The BRADA program shall be used for this analysis.

4. Air Quality

An air quality analysis must be conducted for Option A.

A future air quality (carbon monoxide) analysis is required for any intersection where level of service is expected to deteriorate to D and the Proposed Project causes a ten percent increase in traffic, or where the level of service is E or F and the Proposed Project

contributes to a reduction of level of service. The methodology and parameters of the traffic-related air quality analysis must be approved in advance by the Massachusetts Department of Environmental Protection ("DEP") and the BRA. Mitigation measures to eliminate or avoid any violation of air quality standards must be described.

In addition, a description of the garage exhaust system, including location of exhaust vents and air intake vents and specifications, and an analysis of the impact on pedestrian level air quality from operation of the exhaust system shall be required. The impact on the adjacent Park Plaza Hotel must be evaluated and measures to avoid any violation of air quality standards must be described.

5. Geotechnical Impact

The DPIR must study the potential effects of the 10 St. James Avenue Project on subsoil conditions, groundwater levels, potential for ground movement and settlement during excavation and potential impact on adjacent buildings and utility lines. This analysis shall also include a description of the foundation construction methodology, pile-driving proposals, the amount and method of excavation and the disposal of the excavate, and measures to prevent damage to adjacent buildings and utility lines.

Since the excavation is expected to extend approximately 30 feet below the existing groundwater level, an analysis is required of the impact of 10 St. James Avenue Development foundation construction on the maintenance of groundwater levels and on foundation supports of adjacent structures and infrastructures. Measures to ensure that groundwater levels will not be lowered during or after construction must be described.

6. Solid and Hazardous Wastes

The amount and method of demolition of the existing buildings and infrastructure on the project area controlled by the Proponent must be described and the disposal site for the demolition of debris must be identified. The removal and disposal of any asbestos material from buildings to be demolished must also be described.

The presence of any contaminated soil or groundwater shall be evaluated and measures that will be employed to ensure their safe removal and disposal must be described. If

applicable, a site investigation pursuant to the requirements of M.G.L. Ch 21E shall be required for submission under separate cover.

The generation of solid wastes (construction period and operation of the project) and plans for removal and disposal shall be described. Proposals for recycling and reduction of waste generation also shall be described.

7. Noise

Anticipated long-term noise increases from project-generated traffic and from the project's building mechanical equipment shall be evaluated, and the potential impacts on sensitive receptors, including pedestrians and nearby residences and recreation areas, must be described. Measures to minimize noise production and impact and to avoid any violation of applicable City regulations must be described.

8. Construction Impacts

A construction impact analysis is required which includes a description and evaluation of the following:

- a. Potential dust and pollutant emissions and mitigation measures to control these emissions
- b. Potential noise impact and mitigation measures to minimize increase in noise levels
- c. Potential impact on water quality from any dewatering or discharges from the site and measures to prevent pollution of water resources.
- d. Location of construction staging areas and construction worker parking.
- e. Construction schedule, including hours of construction activity.
- f. Access routes for construction trucks and anticipated volume of construction truck traffic.
- g. Measures to protect the public safety.

9. Rodent Control

An analysis of the impact of project construction on rodent populations and a description of the proposed rodent control program, including frequency of application, and compliance with applicable City and State

regulatory requirements is required.

D. URBAN DESIGN COMPONENT

Pursuant to Section 31-5, Paragraph 2, and Section 31-8 of the Code, the following urban design objectives should be addressed in the analysis of options A and B required in the DPIR.

The prevalent building form within the district establishes a 110-125 foot streetwall while a streetwall of approximately 50 feet is proposed by Option A. The Proponent should include analysis explaining why this reduction in the streetwall height is appropriate.

The Proposed Project (Option A) would connect the existing Paine Furniture Building to the new tower with a retail arcade. However, the St. James Avenue entrance to this arcade does not align with any existing significant circulation path or design element. The DPIR should address this circulation issue to determine if a realignment would be appropriate.

Although the illustrations of the Proposed Project indicate that the structure would follow the traditional Boston tripartite building form, the PNF does not provide information on materials or window treatments that would reflect the scale and style of the building. The proposal is encouraged to develop an facade treatment and pattern that reflects the prevalent "punched" opening fenestration pattern of the commercial Back Bay.

The PNF indicates the Proposed Project would encourage street level retail activities, arcade circulation and street amenities to reinforce the prevalent urban pattern. This is seen as a positive benefit of the proposal and the Proponent is encouraged to retain and improve upon this concept in the DPIR.

View Analyses must be conducted for Options A and B, where alternate massing of the building will be visible from important public or private areas. View studies must be conducted of existing projects and proposed development from each of the major roadways in the area, and from each of the public parks or open spaces within the vicinity. Long-ranged (distanced) views of the proposed project should also be studied to assess the impact on the skyline or other view lines. The view locations should be approved by the BRA before analysis is begun. View studies should be cognizant of light and shadow, massing and bulk. Written and/or graphic description of the building materials and its texture, color, and general fenestration patterns of the

proposed development.

The following urban design materials for the DPIR must be submitted for Option A and as required for Option B to communicate the intentions of the Proposed Project and facilitate a comparison of the different alternatives.

1. Written description of program elements and space allocation for each element
2. Plan for the surrounding area and district and sections at an appropriate scale (1" = 100' or larger) showing relationships of the Proposed Project to the surrounding area and district:
 - a. massing
 - b. building height
 - c. scaling elements
 - d. open space
 - e. major topographical features
 - f. pedestrian and vehicular circulation
 - g. land use
3. Black and white 8"x10" photographs of the site and neighborhood
4. Sketches and diagrams to help clarify design issues and massing options for Options A and B. A detailed written sensitivity analysis of these design issues and massing options should accompany the sketches.
5. Eye-level perspective (reproducible line drawings) showing the proposal in the context of the surrounding area
6. Aerial views of the project (existing and proposed)
7. Site sections at 1" = 20' or larger showing relationships to adjacent buildings and spaces
8. Site plan at an appropriate scale (1" = 20' or larger) showing:
 - a. General relationships of proposed and existing adjacent buildings and open space
 - b. Open spaces defined by buildings on adjacent parcels and across streets
 - c. General location of pedestrian ways, driveways, parking, service areas, streets, and major landscape features

- d. Pedestrian, handicapped, vehicular and service access and flow through the parcel and to adjacent areas
 - e. Survey information, such as extending elevations, benchmarks, and utilities
 - f. Construction limits
9. Massing model at 1" = 40' and a study model at 1" = 16' or 1" = 20' showing the facade design
10. Drawings at an appropriate scales (e.g., 1" = 8', 1"-16', or 1"-20') to describe the architectural massing, facade design and proposed materials including:
- a. Building and site improvement plans
 - b. Elevations in the context of the surrounding area
 - c. Sections showing organization of functions and spaces
 - d. Preliminary building plans showing ground floor and typical upper floors
 - e. Phasing of both buildings in the proposed project
 - f. Before and after the demolition and reconstruction of the existing Greyhound structure.
11. Proposed schedule for submittal of all designs or development related materials.

E. HISTORIC RESOURCES COMPONENT

The Paine Furniture Building and the Greyhound Bus Terminal were found to be ineligible for listing on the National Register of Historic Places by the Massachusetts Historical Commission. Therefore they are not listed in the State Register of Historic Places.

However, the Boston Landmarks Commission staff requests that the Proponent provide the following documentation of the Greyhound Bus terminal structure and the Paine Furniture Building:

Photographic Documentation:

- o Present day views, HABS level (Black & White, large format, not less than 4x5)
- o Photographic copies of historic views
- o Photographic copies of original drawings

The Boston Landmarks Commission's comments on the PNF have been included in the Scope. (See Appendix 4).

F. INFRASTRUCTURE SYSTEMS COMPONENT

An infrastructure impact analysis must be performed for Option A.

The discussion of Proposed Project impacts on infrastructure systems should be organized system-by-system as suggested below. The applicant's submission must include an evaluation of the Proposed Project's impact on the capacity and adequacy of existing water, sewerage, energy (including gas and steam), and electrical communications (including telephone, fire alarm, computer, cable, etc.) utility systems, and the need reasonably attributable to the proposed project for additional systems facilities.

Any system upgrading or connection requiring a significant public or utility investment, creating a significant disruption in vehicular or pedestrian circulation, or affecting any public or neighborhood park or streetscape improvements, comprises an impact which must be mitigated. The DPIR must describe anticipated impacts in this regard, including specific mitigation measures, and must include nearby Proposed Project buildout figures in the analysis, as well as utility reconfigurations proposed under the Central Artery project.

In the case of 10 St. James Avenue, particular consideration should be given to the upgrading or reconfiguration of existing connections, including the potential upgrading of any combined sewerage systems to separate storm drain and sanitary sewer systems.

The Proposed Project must also address relocation of, and improvements or terminations to, any active utility lines which cross or enter the site.

Thorough consultation with the planners and engineers of the utilities will be required, and should be referenced in the Infrastructure Component section. A presentation of the Proposed Project, with special focus on infrastructure (and transportation and public improvements) issues, before the Traffic Liaison Committee or its equivalent is strongly recommended.

1. Water and Sewer Systems

The Water and Sewer Systems Analysis must include the following:

- a. Estimated water consumption and sewage generation from the Proposed Project and the basis for each estimate. Include separate calculations for air conditioning system make-up water
- b. Description of the capacity and adequacy of water and sewer systems and an evaluation of the impacts of the Proposed Project on those systems
- c. Identification of measures to conserve resources, including any provisions for recycling
- d. Description of the Proposed Project's impacts on the water quality of Boston Harbor or other water bodies that could be affected by the project, if applicable
- e. Description of mitigation measures to reduce or eliminate impacts on water quality
- f. Description of impact of on-site storm drainage on water quality
- g. Detail methods of protection proposed for BSWC sewer lines and water mains in Stuart Street and St. James Avenue during construction

Sewer systems and stormwater systems must be separated if possible; utilization of combined systems should be avoided. Thorough analysis and continuing discussions with BWSC are required.

Water supply systems adjacent to the project and servicing the project should be looped so as to minimize public hazard or inconvenience in the event of a main break.

2. Energy Systems

The Energy Systems Analysis must include the following:

- a. Description of energy requirements of the project and evaluation of project impacts on resources and supply
- b. Description of measures to conserve energy usage and consideration of the feasibility of including solar energy provisions or other on-site energy provisions.
- c. Detail the energy source of the interior space heating: how obtained, and, if applicable, plans for reuse of condensate.

The location of transformer and other vaults required for electrical distribution or ventilation must be chosen to minimize disruption to pedestrian paths and public improvements both when operating normally and when being serviced, and must be described.

Information is required regarding Boston Edison's ability to supply electrical energy for project needs, including information on any new substations planned for the area.

APPENDIX 1

REQUIRED FINANCIAL INFORMATION 10 ST. JAMES AVENUE

DEVELOPMENT PROFORMA includes all the information normally found in a development proforma, by phase. This includes, but is not limited to:

Land acquisition costs, per land square foot and total, by parcel. Include distinctions between attributed value and actual out-of-pocket costs, if any. Also include any imputed or actual carrying costs.

Attribution of acquisition expense over project components (per FAR square foot office, retail, cultural, parking, etc.).

All hard costs on a per-unit and total basis, by phase (disaggregated into base building, tenant improvement work, rehabilitation work, residential finishes, garage cost, site work, furniture, fixtures and equipment, etc.).

All soft costs on a per-unit and total basis, by phase (disaggregated into individual line items such as architectural, engineering, legal, accounting and developer's fees and any other professional fees, insurance, permits, real estate tax during construction, etc.).

All contingencies on a per-unit and total basis, by phase (specify whether contingency is on hard cost, soft cost, or total cost).

All assumptions regarding financing terms on acquisition, pre-development, and construction loans, by phase (including financing fees, interest rates, terms, drawdown assumptions, terms, participations, amortization).

Calculation of housing and jobs linkage obligation in accordance with Articles 26A and B, and anticipated payment method (over term of obligation or on a net present value basis).

Any other project-related expenses not within any of the above categories.

Calculation of total development cost by component, including total and per unit breakdown (e.g. per square foot office, retail, cultural, etc., per parking space, etc.).

Sources of debt and equity for total project costs.
Appropriate return measures (return on equity, return on total development cost, internal rate of return; specify method of calculation and hurdle rates).

15-YEAR OPERATING PROFORMA includes all the information normally found in an operating proforma, on a yearly basis. This includes, but is not limited to:

Tabulation of gross and net (leasable) square feet for all commercial space, etc.

Schedule of all rents whether base or percentage rents, on a per square foot and total basis (including anticipated garage rates and occupancy).

Anticipated operating expenses and real estate taxes on per square foot and total basis, and clear explanation of division of expenses between owner and tenants of all commercial, retail, cultural, and garage uses).

All other expense and vacancy assumptions set forth to calculate cash available for debt service.

Anticipated leasing patterns (5-yr, 10-yr, etc.), lease-up rates and calculation of operating deficits if any.

Tenant inducements including free rent, tenant improvement allowances, etc.

Calculation of debt service, before tax cash flow, debt coverage ratios.

APPENDIX 2

TRANSPORTATION COMPONENT ATTACHMENT

BOSTON TRANSPORTATION DEPARTMENT SCOPE OF WORK

Scope of Work
Transportation Access plan
10 St. James Avenue Project
Boston, Massachusetts

Scope of Work

A. Description of Services

The developer must evaluate the traffic impacts associated with the proposed 10 St. James Avenue project in Boston, Massachusetts. The project will include a restored Paine Furniture Building (75 Arlington Street) and a proposed adjacent office and retail building fronting St. James Avenue and Stuart Street on the site which is currently occupied by the Greyhound Bus Terminal. The results of this evaluation will be documented in a Transportation Access Plan report prepared for submission to the Boston Transportation Department. The report will include the following:

- o A definition of existing traffic, transit, and parking conditions.
- o An evaluation of the project's long-term impacts on transit, transit and pedestrian activities as well as on parking demand.
- o An evaluation of the project's short-term traffic impacts related to construction activity.
- o Identification of appropriate measures to mitigate project impacts, including long-term project impact monitoring.

Any previous or ongoing transportation studies conducted in the area will be incorporated, including the Boston Transportation Department's Transportation Strategies Project for the Back Bay

B. Study Area

The specific intersection locations to be analyzed include:

1. Stuart/Arlington/Columbus
2. St. James/Providence/Arlington
3. Berkeley Street/Stuart Street

4. Berkeley Street/St. James Avenue
5. Boylston Street/Arlington Street
6. Boylston Street/Berkeley Street
7. Stuart Street/Charles Street

C. Definition of Tasks

Task 1. Identification of Existing Transportation Conditions

The transportation component will include a presentation of data on supply and usage characteristics of the various transportation systems within the study area.

1.1 Traffic. Available traffic volume counts will be supplemented with new counts, as necessary. Based on data gathered from all sources, a preliminary base traffic volume network will be developed to represent existing morning and evening peak hour conditions. Vehicle trip generation characteristics of the existing 75 Arlington St. building will be determined by survey.

1.2 Parking. Public parking supply characteristics within walking distance of the project site will be defined. The parking inventory will distinguish between on- and off-street spaces. Pricing of off-street parking, particularly for all-day commuter use, will be presented. Availability of public spaces will be determined by reference to published sources such as the BTD's 1987 Downtown Parking Inventory Study, supplemented and updated as necessary with survey data.

The existing parking plan for the site will be presented, including the number of spaces and spaces allocation by user.

1.3 Transit. The operating characteristics of the area's private bus carrier services and Massachusetts Bay Transportation Authority (MBTA) services will be documented.

1.4 Pedestrians. Pedestrian conditions on sidewalks and intersections adjacent to the site will be described. Pedestrian Levels of Service will be calculated for all sidewalks adjacent to the project site.

Task 2. Evaluation of Long-Term Transportation Impacts

Expected long-term transportation impacts in the study area will be estimated and evaluated.

- 2.1 Trip Generation. The project site will first be analyzed to determine current daily and peak period impacts of the site on traffic, parking, and public transportation. The expected uses of the site will be evaluated to determine the proposed garage's traffic generation characteristics. The estimate of impacts will be based on net additional development of the site and will distinguish between the impacts associated with current uses on the site.
- 2.2 Conditions to be Analyzed. In addition to existing conditions, the following future (plus five years) conditions will be analyzed at the study area intersections:
- o No-Build (with only background projects anticipated to be completed included).
 - o Full-Build (with the addition of project-related impacts).
- 2.3 Background Development Projects. Any previously approved building construction projects to be included in the No-Build evaluation will be reviewed with Boston Redevelopment Authority (BRA) and Boston Transportation (BTD) staff prior to the analysis.
- 2.4 Evaluation of Transportation Impacts. Trips expected to be attracted to the proposed development will be added to demands carried by the existing roadway system plus new trips from background projects. Morning and evening peak hour and daily increases will be developed and analyzed for all travel modes. Specific information relevant to the analysis is described below.
- o Traffic Impacts. Volume-to-capacity ratio (v/c), available reserve capacity (ARC), level of service (LOS), and delay calculations at the study intersections.
 - o Parking Impacts. Demand for parking generated by the proposed project will be identified. The analysis will be based on:

assumptions of desired modal split and vehicle occupancy consistent with those identified in the BTD's Back Bay Transportation Planning Study (52% transit share, 1.5 occupants per vehicle for work trips);

the availability of public parking in the surrounding area, as identified in step 1.2 above.

The parking plan for the proposed project, including the number of spaces, intended usage, and space layout will be presented. An analysis of access and egress characteristics and facility design will also be included.

- o **Transit.** The usage of public transportation will be described. Impact of the proposed project on parking, drop-off and layover opportunities, both on- and off-street, for MBTA and private commuter buses which have analyzed traditionally (pre-1989) used the project site will be analyzed.
- o **Pedestrian Impacts.** Pedestrian levels of service will be calculated for all sidewalks adjacent to the project site. Internal pedestrian circulation patterns will be described.
- o **Loading, Service, On-Site Circulation.** Truck and service vehicle traffic to the site will be estimated. Access and egress for emergency vehicles will also be evaluated.

Task 3. Evaluation of Short-Term Impacts (Construction Period)

The transportation assessment will evaluate the impacts of the project during the construction period, including the following:

- o Mode of arrival for construction workers.
- o Parking provisions for construction workers and construction materials deliveries.
- o Frequency, times and routes of truck movements and construction materials deliveries.
- o Temporary storage of construction equipment and materials.
- o The need for full or partial street closures or street occupancy during construction will be defined.

Task 4. Development of Mitigation Measures

Programs or strategies to reduce the transportation impacts will be developed and may include the following:

- o Measures to minimize vehicle-trip generation.
- o Roadway/traffic operation improvements.
- o Transit improvements and measures to preserve commuter bus layover opportunities in the Back Bay.
- o Parking management improvements.
- o Pedestrian improvements.
- o Long-term project impact monitoring.

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APPENDIX 3

ENVIRONMENTAL COMPONENT ATTACHMENT A Protocol for Quantitative Wind Impact Study

- o Data shall be presented for both the future baseline (no-build) and for the future build scenario(s).
- o The analysis shall include the mean velocity exceeded 1% of the time and the effective gust velocity exceeded 1% of the time. The effective gust velocity shall be computed as the hourly average velocity plus $1.5 \times \text{root mean square variation about the average}$. An alternative velocity analysis (e.g., equivalent average) may be presented with the approval of the BRA.
- o Wind direction shall include the sixteen compass points. Data shall include the percent or probability of occurrence from each direction on seasonal and annual bases.
- o Results of the wind tunnel testing shall be presented in miles per hour (mph).
- o Velocities shall be measured at a scale equivalent to an average height of 4.5-5 feet.
- o The model scale shall be such that it matches the simulated earth's boundary and shall include all buildings within at least 1,600 feet of the project site. All buildings taller than 25 stories and within 2,400 feet of the project site should be placed at the appropriate location upstream of the project site during the test. The model shall include all buildings recently completed, under construction, and planned within 1,500-2,000 feet of the project site. Prior to testing, the model shall be reviewed by the Authority. Photographs of the area model shall be included in the written report.
- o Sampling time should be for about $(166000/(m \times V_{gr}))$ sec, where m is the scale ratio (300-600) and V_{gr} the gradient velocity in the wind tunnel in mph. The measuring device used to measure the ground winds should have a flat frequency response from dc. to a cut-off frequency of $([m \times V_{gr}]/720)$ hz.
- o Tunnel calibration should include the measured boundary

layer profile at the center of the test section and a distance of one quarter of the tunnel width at each sideline. The boundary layer profile includes the mean velocity and turbulent intensity as a function of height above the floor.

- o The boundary layer profile should conform approximately to the profile $V(x)=V_0 (x/x_0)^a$, where V_0 is the tunnel velocity at gradient height, x_0 is the gradient height, and a is the exponent (approximately equal to 0.3).
- o For each measurement site the ratio of mean, rms, and peak velocity to the velocity at gradient height as a function of azimuth is to be reported.
- o Data reduction for seasonal and annual mean and effective gust predictions should be based on "wind rose" conforming to the attached probability tables (Attachment B) or their equivalent
- o The written report shall compare mean and effective gust velocities on annual and seasonal bases, for no-build and build conditions, and shall provide a descriptive analysis of the wind environment and impacts for each sensor point, including such items as the source of the winds, direction, seasonal variations, etc, as applicable. The report shall also include an analysis of the suitability of the locations for various activities (e.g., walking, eating, sitting, etc.) as appropriate, in accordance with recognized criteria.
- o The report also shall include a description of the testing methodology and model, and a description of the procedure used to calculate the wind velocities (including data reduction and wind climate data). Detailed technical information and data may be included in a technical appendix but should be summarized in the main report.
- o The report shall include maps indicating sensor locations and wind speed data, graphically indicating changes in wind speeds due to the project. All maps shall include a North arrow.

ENVIRONMENTAL COMPONENT ATTACHMENT B

WEIBULL COEFFICIENTS FOR BOSTON

From Surface Data At Logan Airport (1945-1965)

Table 1

WEIBULL COEFFICIENTS FOR BOSTON
FROM SURFACE DATA AT LOGAN AIRPORT (1945-1965)

BOSWYB.ANN
12/16/85

ANNUAL

NO.	DIRECTION	An	Kn	Un(mph)
1	NNE	0.0385	1.76	20.97
2	NE	0.0410	1.76	24.04
3	ENE	0.0404	1.72	22.19
4	E	0.0443	1.74	20.15
5	ESE	0.0469	2.26	19.56
6	SE	0.0379	2.47	17.90
7	SSE	0.0313	2.14	16.26
8	S	0.0447	2.04	18.94
9	SSW	0.0750	2.02	21.69
10	SW	0.1098	2.35	21.79
11	WSW	0.0730	2.29	20.87
12	W	0.0815	2.22	22.87
13	WNW	0.1149	2.21	24.28
14	NW	0.1017	2.34	25.08
15	NNW	0.0717	2.48	22.78
16	N	0.0475	1.99	19.87
17	ALL	1.0000	2.05	22.10

Table 2

WEIBULL CONSTANTS FOR BOSTON
FROM SURFACE DATA AT LOGAN AIRPORT (1945-1965)

BOSWYB.WIN

WINTER
DEC 16 1985

WINTER

NO.	DIRECTION	An	Kn	Un(mph)
1	NNE	0.0363	1.72	21.13
2	NE	0.0289	1.43	24.10
3	ENE	0.0226	1.60	26.45
4	E	0.0221	1.56	23.01
5	ESE	0.0208	1.49	18.45
6	SE	0.0219	1.96	18.16
7	SSE	0.0259	1.78	17.52
8	S	0.0373	1.78	18.33
9	SSW	0.0498	2.06	22.35
10	SW	0.0855	2.46	23.60
11	WSW	0.0780	2.69	23.35
12	W	0.0996	2.66	26.10
13	WNW	0.1613	2.36	27.03
14	NW	0.1444	2.42	27.30
15	NNW	0.1004	2.66	24.38
16	N	0.0652	2.41	22.51
17	ALL	1.0000	1.66	19.83

Table 3

WEIBULL CONSTANTS FOR BOSTON
FROM SURFACE DATA AT LOGAN AIRPORT (1945-1965)

BOSWYB.FAL

FALL
DEC 16 1985

FALL

NO.	DIRECTION	An	Kn	Un(mph)
1	NNE	0.0469	1.71	21.26
2	NE	0.0450	1.68	23.79
3	ENE	0.0402	1.92	22.88
4	E	0.0419	1.52	20.03
5	ESE	0.0419	2.56	18.93
6	SE	0.0362	2.51	16.81
7	SSE	0.0311	2.57	16.60
8	S	0.0435	2.22	17.83
9	SSW	0.0738	1.55	18.08
10	SW	0.1194	2.20	21.20
11	WSW	0.0715	2.27	20.03
12	W	0.0755	2.16	20.25
13	WNW	0.1060	2.20	21.73
14	NW	0.1004	2.23	22.11
15	NNW	0.0748	2.29	21.26
16	N	0.0519	2.07	18.56
17	ALL	1.0000	1.70	18.72

Table 4

WEIBULL CONSTANTS FOR BOSTON
FORM SURFACE DATA AT LOGAN AIRPORT (1945-1965)

BOSWYB.SPR

SPRING
DEC 16 1985

SPRING

NO.	DIRECTION	An	Kn	Un(mph)
1	NNE	0.0404	1.99	22.77
2	NE	0.0516	2.03	26.70
3	ENE	0.0566	1.82	24.09
4	E	0.0586	2.00	22.07
5	ESE	0.0609	2.53	22.04
6	SE	0.0436	2.48	19.72
7	SSE	0.0317	2.07	16.92
8	S	0.0459	2.15	20.81
9	SSW	0.0756	2.17	24.40
10	SW	0.0893	2.40	23.18
11	WSW	0.0570	2.20	22.39
12	W	0.0730	2.34	25.77
13	WNW	0.1047	2.47	26.48
14	NW	0.1004	2.61	27.06
15	NNW	0.0700	2.82	24.73
16	N	0.0407	1.86	20.50
17	ALL	1.0000	2.17	23.42

Table 5

WEIBULL CONSTANTS FOR BOSTON BOSWYB.SUM
 FORM SURFACE DATA AT LOGAN AIRPORT (1945-1965)

SUMMER
 DEC 16 1985

SUMMER

NO.	DIRECTION	An	Kn	Un(mph)
1	NNE	0.0304	1.69	18.10
2	NE	0.0384	2.36	19.79
3	ENE	0.0423	2.21	18.24
4	E	0.0547	3.10	18.75
5	ESE	0.0641	3.13	18.55
6	SE	0.0498	2.78	17.15
7	SSE	0.0364	2.76	14.52
8	S	0.0521	2.16	18.03
9	SSW	0.1009	2.67	21.53
10	SW	0.1448	2.49	20.16
11	WSW	0.0856	2.41	18.49
12	W	0.0778	2.20	18.73
13	WNW	0.0876	2.13	19.26
14	NW	0.0614	2.42	21.17
15	NNW	0.0417	2.29	18.95
16	N	0.0320	2.24	17.56
17	ALL	1.0000	2.24	18.97

APPENDIX 4

HISTORIC RESOURCES ATTACHMENT

BOSTON LANDMARKS COMMISSION COMMENTS



January 3, 1991

Boston Landmarks Commission

City of Boston
The Environment
Department

Boston City Hall/Room 805
Boston, Massachusetts 02201
617/725-3850

Mr. Tom Maistros
Boston Redevelopment Authority
Boston City Hall

Dear Tom:

Thank you for the opportunity to comment on the Project Notification Form for the 10 St. James Street proposal. The staff has reviewed the section concerning historic and archaeological resources and concur with the findings. However, the Landmarks Commission recommends that the PIR look closely at the recently completed Stuart Street Corridor architectural inventory in order to amend the list of significant properties.

Additional properties, which are within a one block radius of the 10 St. James project, have been recommended for the National Register include: 154 Berkeley (Police Dept. Headquarters), 190-200 Berkeley (Old Hancock Tower), 175-185 Berkeley (Liberty Mutual Building), 119-215 Columbus (Youth's Companion Building), 219-233 Columbus (Pope Manufacturing Building), 330 Stuart Street (Salada Tea Building) and most important, 75 Arlington Street (the Paine Furniture Building). In addition, the survey overview recommends a Stuart Street/Park Square National Register district which encompasses most of the area known as the Stuart Street Corridor.

The Landmarks Commission staff requests that the shadow impacts of the proposed structure on the Public Garden be analyzed. The staff is also concerned with the proposed height of the project, and would like to participate in design review of this project given its proximity to many local landmarks and historic districts.

Thank you for the opportunity to comment

Sincerely

Carol Huggins
Director of Survey and Planning
Boston Landmarks Commission
Environment Department

